User Guide

HP ProLiant Application Storage Manager

Product Version: 1.0

First Edition (November 2004)

Part Number: T3669-90901

This document is intended for network and storage administrators who design and implement Microsoft Exchange Server 2003 storage solutions.

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About This Guide

Intended audience

This book is intended for network and storage administrators who are experienced with Microsoft® Exchange Server 2003.

Prerequisites

Before you use the HP ProLiant Application Storage Manager, you will need:

- An existing Exchange server running Microsoft Exchange Server 2003.
- HP ProLiant Application Storage Manager installed on your Storage Server. (see page 9 for installation instructions).
- HP ProLiant Storage Server iSCSI Feature Pack software installed on your Storage Server.
- An Exchange Agent from the iSCSI Feature Pack, installed on your Exchange server.
- An HP Storage Server (see Table 2, on page 9 for a list of servers).

Related documentation

For more information see:

- HP StorageWorks products http://www.hp.com/storage
- HP Network Attached Storage products http://www.hp.com/go/nas
- Microsoft Storage Technologies - iSCSI http://www.microsoft.com/windowsserversystem/storage/technologies/iscsi/default.mspx
- Microsoft Windows Storage Server 2003 http://www.microsoft.com/windowsserversystem/wss2003/default.mspx

- Microsoft Exchange Server 2003 http://www.microsoft.com/exchange

Document conventions

Table 1: Document conventions

Convention	Element
Blue text: Figure 1	Cross-reference links
Bold	Menu items, buttons, and key, tab, and box names
Italics	Text emphasis and document titles in body text
`Monospace font`	User input, commands, code, file and directory names, and system responses (output and messages)
`Monospace, italic font`	Command-line and code variables
Blue underlined sans serif font text (http://www.hp.com)	Web site addresses

Overview

The HP ProLiant Application Storage Manager (ASM) is an easy-to-use storage program that is optimized for Microsoft Exchange data.

Application Storage Manager:

- Allows you to migrate (host) Exchange components from the Exchange server on your storage server.
- Provides a user-friendly interface to help you manage and monitor your Exchange Storage data and file shares.
- Displays an overall view of your storage so that you can easily see how your storage is divided among the applications.
- Allows detailed views of your storage so that you can make detailed adjustments as your storage needs change.
- Eliminates multiple storage and application management interfaces.
- Simplifies the management of your storage.

Getting Started

2

This chapter provides information to help you:

- Install the HP ProLiant Application Storage Manager (ASM)
- Start the Application Storage Manager
- Understand the user interface
- Use online help

Installing the Application Storage Manager

The Application Storage Manager is part of, and installed with, the HP ProLiant Storage Server iSCSI Feature Pack product. For installation instructions, see the *HP ProLiant Storage Server iSCSI Feature Pack User Guide* on the Documentation CD.

Before installing the Application Storage Manager, you will need:

- The HP ProLiant Storage Server iSCSI Feature Pack software and User Guide
- An existing Exchange server with the Windows 2003 Server operating system, running Microsoft Exchange Server 2003
- One of the following HP storage servers running Microsoft Windows Storage Server 2003:

Table 2: Supported storage servers

Supported storage servers
HP ProLiant ML110 Storage Server
HP ProLiant DL100 Storage Server
HP ProLiant ML350 G4 Storage Server
HP ProLiant ML370 G4 Storage Server
HP ProLiant DL380 G4 Storage Server (base, external SCSI, and external SATA models)

Supported storage servers
HP StorageWorks NAS 500s
HP StorageWorks NAS 1500s
HP StorageWorks NAS 2000s

When installing the Application Storage Manager and the iSCSI Feature Pack on your storage server, you also must install the ASM Exchange Agent on your existing Exchange server. This agent allows you to manage and monitor your Exchange storage and supports the migration of Exchange components (Mail Stores, Public Stores, and Logs) from the Exchange server to your storage server.

Mail Stores are the part of Microsoft's Web storage system that maintains data in mailboxes. Public Stores maintain data in public folders. Logs are Storage Group log files that maintain a record of every message stored in a storage group.

Note: HP recommends isolating the iSCSI I/O traffic between the storage server and Exchange server through a dedicated connection for optimal performance.

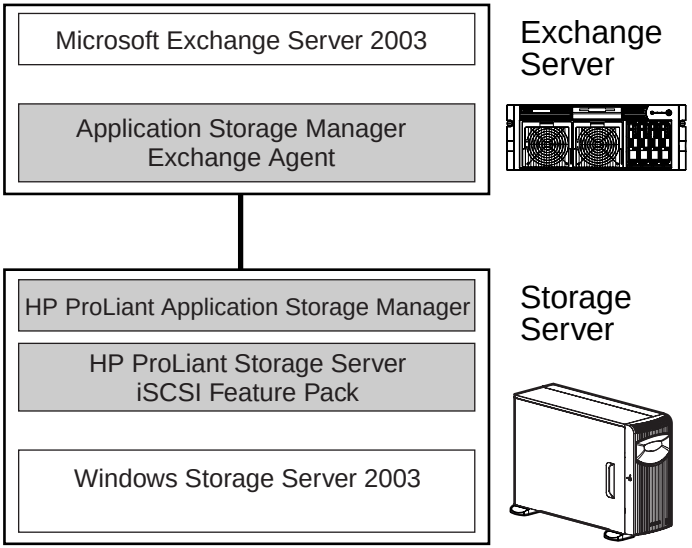


Figure 1: Application Storage Manager components

Note: Application Storage Manager requires Microsoft .NET Framework 1.1 Service Pack 1 on your Storage Server and Exchange Server. The iSCSI Feature Pack installation installs this Service Pack as part of the ASM installation procedure. For more information about the Service Pack, see http://support.microsoft.com/default.aspx?kbid=885055

Accessing the Application Storage Manager

On the HP ProLiant Storage Server:

- Access the Application Storage Manager from the start menu by selecting **Start** > **Programs** > **HP Application Storage Manager** > **Application Storage Manager**.
- Access Application Storage Manager from the Windows Storage Server 2003 Web UI by selecting **HP Utilities** > **Application Storage Manager**. A login dialog box opens.

The Application Storage Manager main window opens.

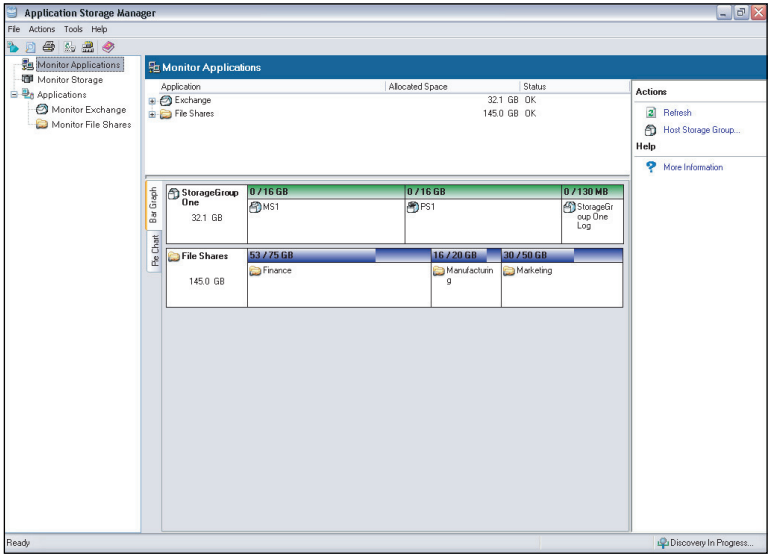
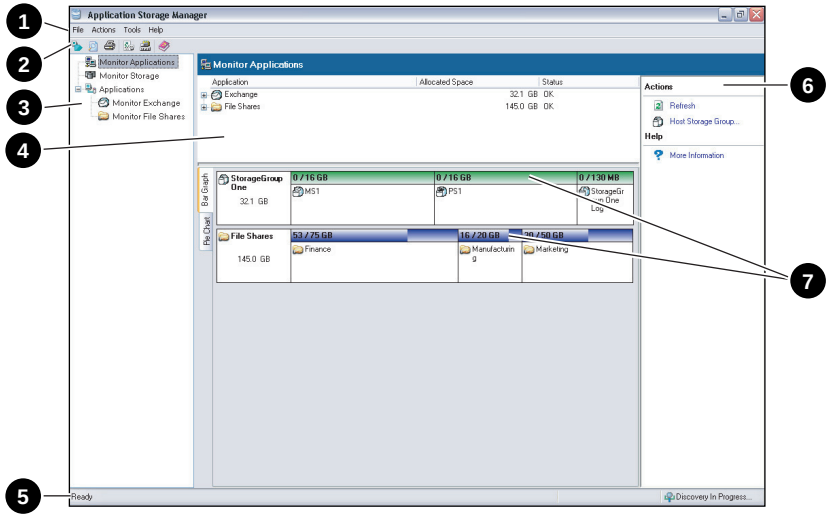


Figure 2: Application Storage Manager main window

About the interface

The main window includes the following components:



❶ Menu bar
❷ Toolbar
❸ Navigation pane
❹ Task View pane
❺ Status bar
❻ Actions pane
❼ Storage Capacity bars

Figure 3: Main window components

Menu bar

Four menus are available from the menu bar.

The File menu contains:

Menu item	Description
Export to Excel	Exports the information in the Task View pane to an Excel spreadsheet.
Page setup	Lets you set options that control the appearance of printed sheets.
Print Preview	Displays how the page will look when printed.
Print	Prints a detailed view of your Applications, Storage Groups, Mail Stores, Public Stores, Logs, File Share Collections, File Shares, Logical Disks, and Volumes, based on the current display in the Task View.
Exit	Exits the Application Storage Manager.

The Actions menu displays actions based on your current selection in the Task View pane:

Menu item	Description
Allocate space	Opens a configuration wizard to assist you in changing the capacity allocated to an Exchange component or File Share.
Remove from view	Lets you remove Exchange Storage components (Mail Stores, Public Stores, and Logs) from your Task View pane.
Properties	Displays all properties associated with the current selection.
Refresh	Refreshes the Task View pane.
Host a Storage Group	Opens a configuration wizard to assist you in hosting existing Exchange Storage Group components (Mail Stores, Public Stores, and Logs) on your storage server.

The Tools menu contains:

Menu item	Description
Task Viewer	Opens a Task Viewer dialog box that displays the status of current tasks, errors, and task history.
Options	Allows changes to the user interface Color settings, Scaling of the Storage Capacity bars (Storage Groups, Mail Stores, Public Stores, Logs, File Share Collections, File Shares, Logical Disks, and Volumes), and Allocate Storage advanced dialog settings.

The Help menu contains:

Menu item	Description
Help on	Opens online help.
Help Contents	Opens the online help Table of Contents.
About Application Storage Manager	Displays the current user interface components.

Toolbar

The toolbar contains icons for commonly used shortcuts:

Tool	Description
Export to Excel	Exports the information in the Task View pane to an Excel spreadsheet.
Print preview	Displays how the page will look when printed.
Print	Prints a detailed view of your Applications, Storage Groups, Mail Stores, Public Stores, Logs, File Share Collections, File Shares, Logical Disks, and Volumes, based on the current display in the Task View.
Task Viewer	Opens a Task Viewer dialog box that displays the status of current tasks, errors, and task history.
Options	Allows changes to the user interface Color settings, Scaling of the Storage Capacity bars (Storage Groups, Mail Stores, Public Stores, Logs, File Share Collections, File Shares, Logical Disks, and Volumes), and Allocate Storage advanced dialog settings.
Help Contents	Opens the online help Table of Contents.

Navigation pane

The navigation pane allows you to navigate between the following items:

Item	Description
Monitor Applications	Displays storage information for all of your applications and their sub-components in the Task View pane.
Monitor Storage	Displays your allocated and unallocated space in the Task View pane.
Applications	Displays all applications that are available to be managed and monitored.
Monitor Exchange	Displays detailed storage information of your Exchange data in the Task View pane.
Monitor File Shares	Displays detailed storage information of your File Shares in the Task View pane.

Task View pane

The Task View pane is the primary window for monitoring your applications and storage. It displays the overall storage utilization in the following areas:

- Monitor Applications
- Monitor Storage
- Applications
- Monitor Exchange
- Monitor File Shares

Monitor Applications

Monitor Applications displays all of your applications in one view and monitors the storage usage of your applications.

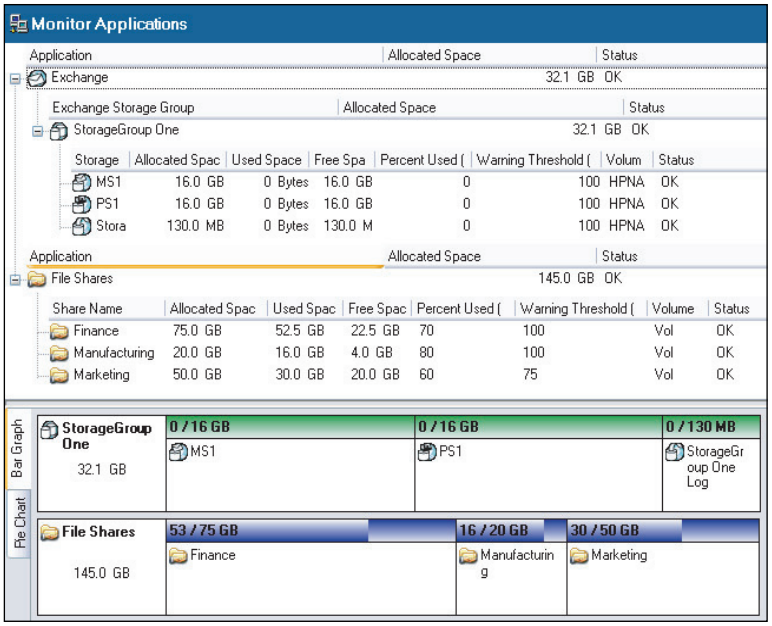


Figure 4: Monitor Applications window

Monitor Storage

Monitor Storage displays all of your storage components in one view. This view is organized by storage components (logical disks and volumes) and displays how your application data is distributed across your storage. It also displays unallocated storage and data on your server that is not being monitored.

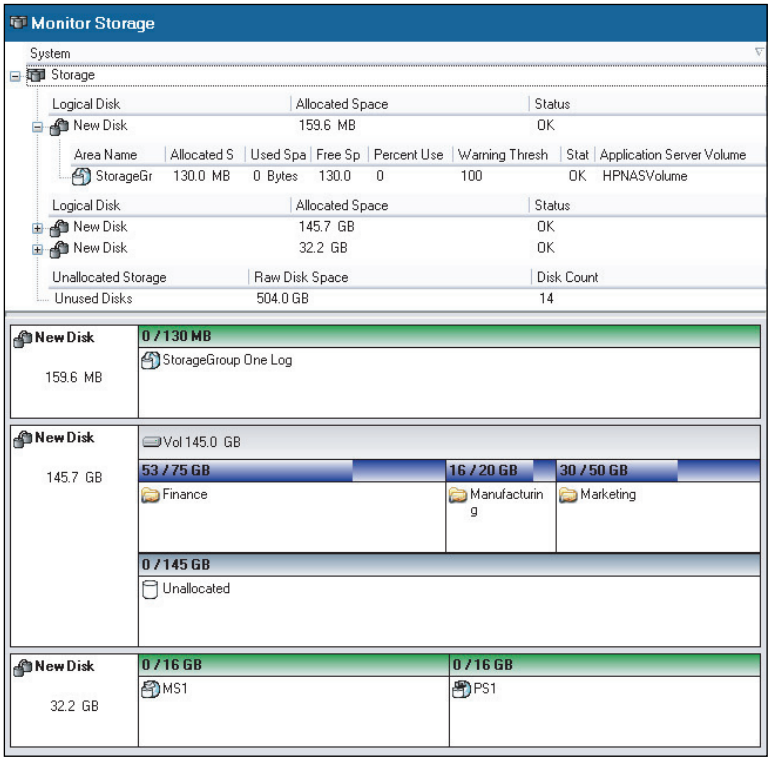


Figure 5: Monitor Storage window

Applications

Applications displays all applications that are currently being managed or monitored.

Figure 6: Applications window

Monitor Exchange

Monitor Exchange displays detailed information of your Exchange storage. It provides a filtered view exclusively of Exchange components and provides additional information not found in the Monitor Applications view.

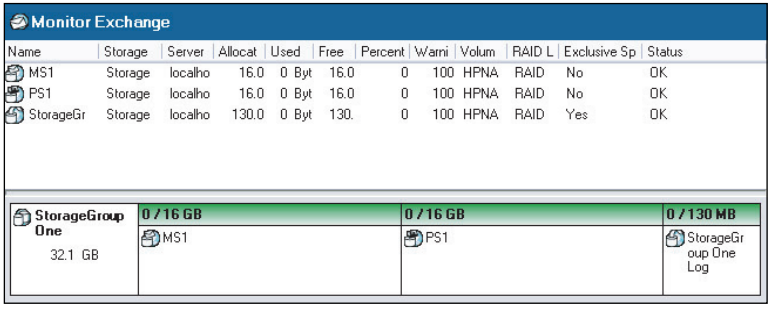


Figure 7: Monitor Exchange window

Monitor File Shares

Monitor File Shares displays detailed information of your top-level file shares. It provides a filtered view exclusively of File Shares and provides additional information not found in the Monitor Applications view.

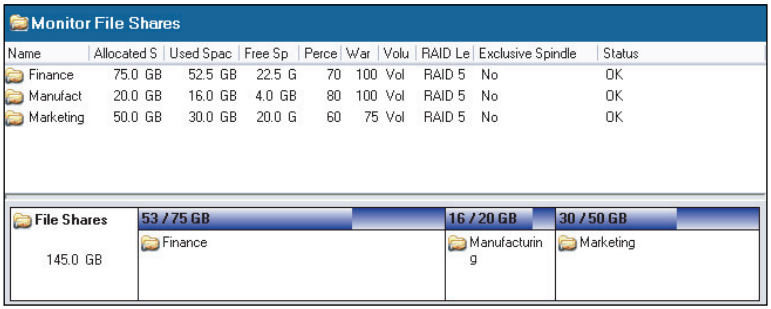


Figure 8: Monitor File Shares window

Status bar

The status bar is the area across the bottom of the user interface. It displays server information and system alerts.

Actions pane

The Actions pane presents a list of available actions, based on the current selection in the Task View pane.

Action	Description
Refresh	Refreshes the Task View pane.
Host Storage Group	Opens a configuration wizard to assist you in hosting existing Exchange Storage Group components (Mail Stores, Public Stores, and Log file areas) on your storage server.
Allocate space	Opens a wizard to allow changes to the allocated storage capacity for either Exchange components or File Shares.
Properties	Displays all properties associated with the selection.
More information	Displays context-sensitive online help.

Using online help

Click the Help button in the dialog box windows, or Help from the menu bar to access online help. This online help is part of Application Storage Manager.

Help is organized into main-level and sub-level topics. The tabs in this help system are:

- **Contents** — Displays folders and pages that represent the categories of information in the online user guide. When you click a collapsed node, it expands to display its content (subtopics and pages). When you click an expanded node, it collapses. When you click pages, you select topics to view in the right-hand pane.
- **Index** — Displays a list of keywords and keyword phrases. These terms are associated with topics in the help system. To open a topic in the right-hand pane associated with a keyword, double-click the keyword.
- **Search** — Allows you to search on keywords and keyword phrases. To search for a topic, enter the keyword in the search box and click **List Topics**, and then in the bottom box click the topic to display and click **Display**.
- **Favorites** — Allows you to save and click in a list of help topic bookmarks.

Printing help information

You can print online topics and information directly from the viewer. The available print options are determined by the version of your browser.

Click the print icon — — and select your print options.

Managing Your Storage

3

This chapter provides information on managing and monitoring your Microsoft Exchange data and file storage.

Exchange Storage

The Application Storage Manager is optimized for Exchange storage. It provides an application-based user interface for simple management and monitoring of Exchange storage and allows you to host Exchange components (Mail Stores, Public Stores, and Logs) on your storage server.

Note: HP recommends that you backup your Exchange data and Logs prior to migrating.

Hosting Exchange Storage Groups on your HP Storage Server

1. From the menu bar, select **Actions** > **Host Storage Groups**.

   The Exchange Storage Group Configuration Wizard opens to assist you.

2. Click **Next**.

Note: The system searches for attached Exchange servers (or you can enter the name of your existing Exchange server manually). When this process is finished, the system prompts `Discovery Complete`. If no servers are found, verify that the Application Storage Manager service is running as Domain Administrator (see Troubleshooting for more information).

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3. In the drop-down list, select an existing Exchange server which contains the Storage Group you would like to host, or manually enter the name of your existing Exchange server. Click **Next**.

4. In the drop-down list, select the storage group to host on your storage server. The window updates with a list of storage group components to manage. Select the check boxes of the components you want to manage. (If the component is not already on the storage server, it is moved to the storage server.) Click **Next**.

Note: The Exchange Storage Group Configuration Wizard evaluates the storage group components you selected to allow configuration changes. The system default values are based on Microsoft Exchange and storage industry best practices.

5. Make configuration changes to the Mail Store, Public Store, and Log capacities, or accept the system default values by clicking **Next**.

   The Advanced button is for Advanced Storage Attributes that allow detailed changes to the space allocated for the selected component. For more information, see Advanced Storage Attributes.

6. The Task Summary lists your selections for hosting an Exchange Storage Group on your storage server.
   - To make configuration changes, click **Back**.
   - To run tasks immediately click **Finish.**
   - To schedule tasks to run at a later time, select **schedule tasks to run later**, set the scheduler start time, and then click **Finish**.

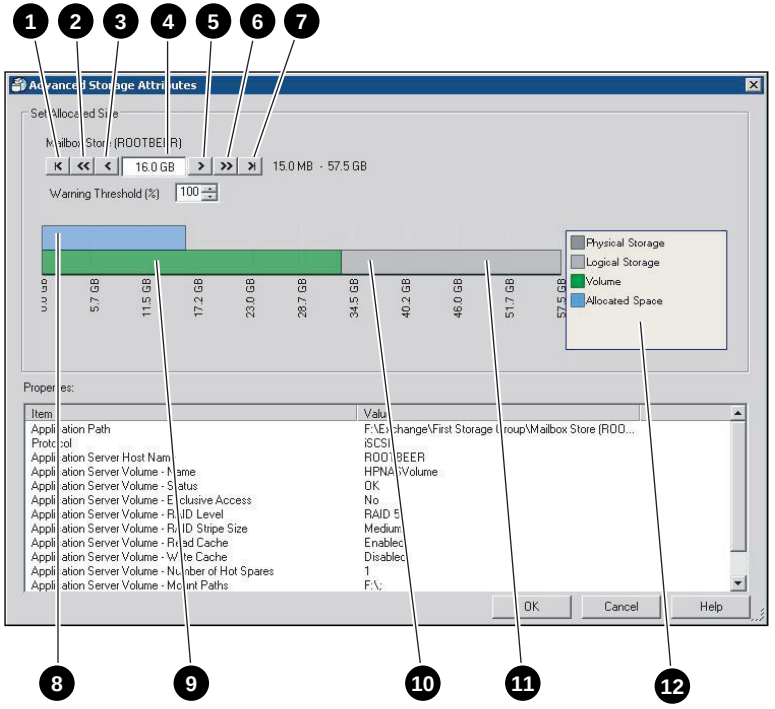
   The Tasks Viewer dialog box opens and displays the status of the tasks.

Note: If you are hosting more than one storage group, repeat steps 1 through 6 for each storage group.

Advanced Storage Attributes

The Advanced button is for Advanced Storage Attributes that allow detailed changes to the space allocated for the selected component.

The Advanced Storage Attributes dialog box displays the current space allocated for a volume, and space into which the volume can be expanded. If your allocated space does not display, see Troubleshooting.



❶ Decrease capacity to previous boundary (unallocated physical space, unallocated logical space, or capacity used)

❷ Decrease capacity by 10 units

❸ Decrease capacity by 1 unit

❹ Current capacity

❺ Increase capacity by 1 unit

❻ Increase capacity by 10 units

❼ Increase capacity to next boundary (capacity used, unallocated logical space, unallocated physical space, or all available space)

❽ Allocated space

❾ Volume

❿ Unallocated Logical space

⓫ Unallocated Physical space (shown here if applicable)

⓬ Legend

Figure 9: Advanced Storage Attributes dialog box

Monitoring Exchange Storage Groups

Monitor Exchange displays a detailed view of your Exchange Storage Groups. This view is helpful when you are interested in seeing the current status of your Exchange Storage Groups and Exchange components (Mail Stores, Public Stores, and Logs). It provides additional information not found in the Monitor Applications view.

To monitor your Exchange Storage Groups, select **Monitor Exchange** in the navigation pane.

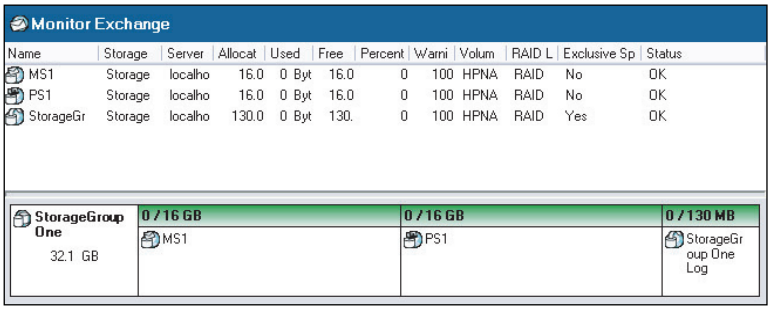
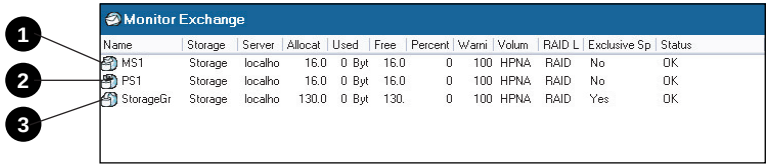


Figure 10: Monitor Exchange Storage Groups window

List view for monitoring Exchange Storage Groups

When monitoring your Exchange Storage Groups, the top half of the Task View pane displays the list view for monitoring Exchange.

Note: You can sort any Exchange component by clicking its various columns.

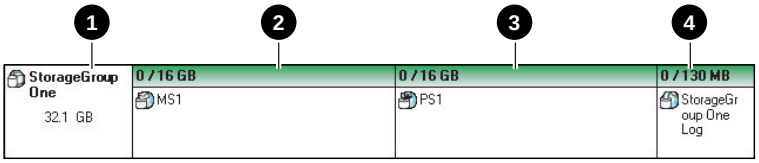


❶ Mail Store
❷ Public Store
❸ Storage Group Log

Figure 11: Monitor Exchange Storage Groups list view

Bar graph view for monitoring Exchange Storage Groups

Located below the list view is the bar graph view for monitoring your Exchange Storage Groups. The bar graph view displays a graphical representation of your Mail Stores (MS1), Public Stores (PS1), and Storage Group Logs.



❶ Storage Group name
❷ Mail Store
❸ Public Store
❹ Storage Group Log

Figure 12: Monitor Exchange Storage Groups bar graph view

Removing Exchange storage components from view

The Application Storage Manager allows you to remove Exchange storage components (Mail Stores, Public Stores, or Logs) from the view. Removing from view does not delete or migrate data; rather you can no longer manage or monitor the component through the Application Storage Manager.

To remove an Exchange component from view:

1. Right-click the component to remove from view.
2. Select **Remove from view**.
3. Click **OK** to confirm the action.

Note: To restore an Exchange component view, run the Host a Storage Group Configuration Wizard and select the component to add back.

Note: To migrate the Exchange components off the storage server, use the Microsoft System Manager Utility on your Exchange server.

Monitoring File Shares

Monitoring File Shares displays a detailed view of your File Share Collections and File Shares. This view is helpful when you are interested in seeing the current status of your allocated shared files exclusively. It provides additional information not found in the Monitor Applications view.

When you install the Application Storage Manager software, all top-level shares on the storage server are automatically discovered. Top-level shares are the first *shared* folders that are identified as the discovery proceeds through the directory hierarchy.

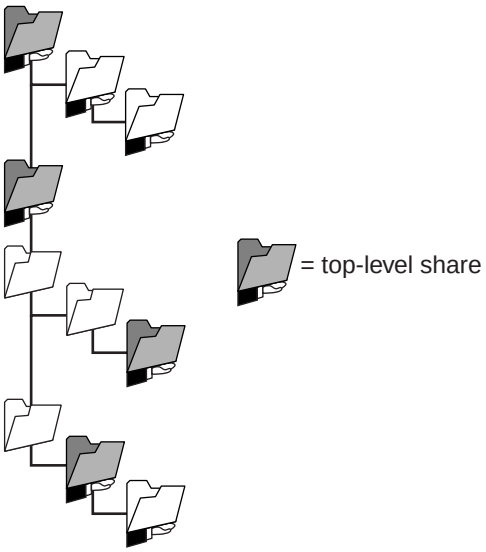


Figure 13: Top-level shares example

Note: If you share a folder above one of the discovered top-level shares, it is monitored and the old share is no longer monitored (see Troubleshooting for more information).

To monitor your shared file storage, select **Monitor File Shares** in the navigation pane.

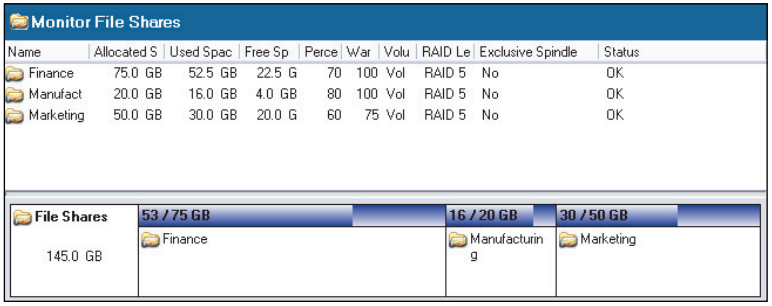
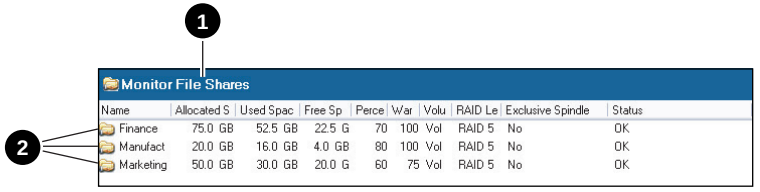


Figure 14: Monitor File Shares window

List view for monitoring File Shares

The list view displays your storage applications as a hierachical tree.

Note: You can sort File Share information by clicking the various columns.

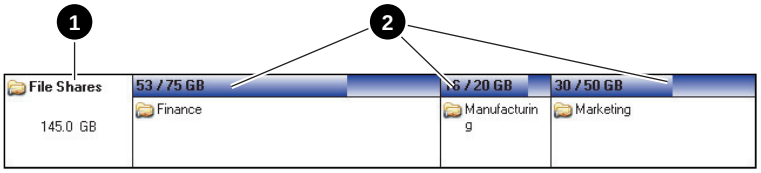


❶ File Share Collection
❷ File Shares

Figure 15: Monitor File Shares list view

Bar graph view for monitoring File Shares

The bar graph view displays a graphical representation of your File Shares.



❶ File Share Collection
❷ File Shares

Figure 16: Monitor File Shares bar graph view

Monitoring Applications

Monitor Applications displays all of your applications in one view. Storage information about your Exchange Storage Groups, Mail Stores, Public Stores, Logs, File Share Collections, and File Shares is displayed in this view.

To monitor applications select **Monitor Applications** in the navigation pane.

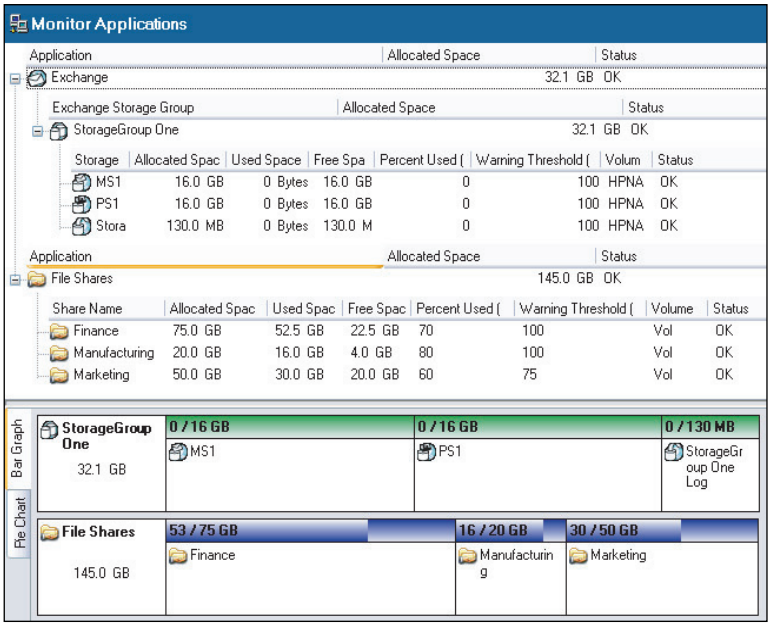


Figure 17: Monitor Applications window

Monitor Applications pie chart view

The pie chart view is a high-level view of your applications that displays the overall storage utilization. To monitor your applications as a pie chart, select the **Pie Chart** tab on the left side of the Task View pane.

Note: The pie chart view is only available when monitoring applications.

Monitoring Storage

Monitor Storage displays all of your storage components in one view. This view is organized by storage components (Logical Disks and Volumes) and displays how your application data is distributed across your storage. Additionally, it displays unallocated storage, and data on your server that is not being monitored. From this view you can easily make changes to your storage capacities as your storage needs change.

To monitor storage select **Monitor Storage** in the navigation pane.

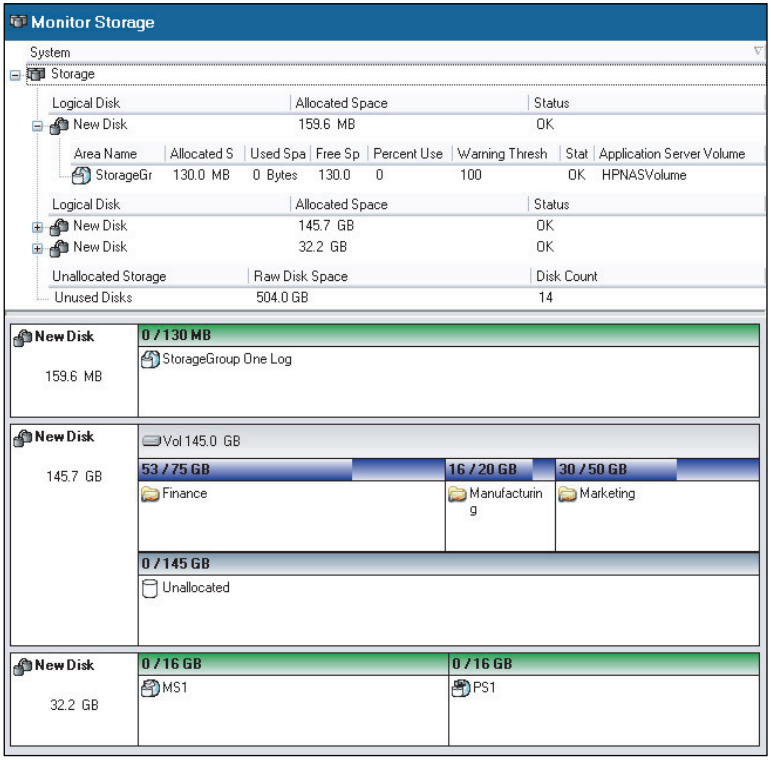


Figure 18: Monitor Storage window

Allocating storage

The storage space on your storage server is made up of physical storage and logical storage. Before you begin increasing your storage, you need to understand these concepts:

- Physical storage is the hardware used for data storage. The physical storage components of the storage server are the disk drives.
- Logical storage is created by software and lets you combine disk space from multiple physical disks into a logical volume.

Note: The Application Storage Manager does not expand logical disks on HP StorageWorks NAS 500s, HP StorageWorks NAS 1500s, HP ProLiant ML110 Storage Servers, or HP ProLiant DL100 Storage Servers. These systems are pre-configured with one volume. Additionally, the ASM does not expand Volumes on Dynamic Disks, or expand the underlying LUN or Logical drive of a Dynamic Disk.

To change the allocated space for an Exchange component (Mail Store, Public Store, or Log) or a File Share:

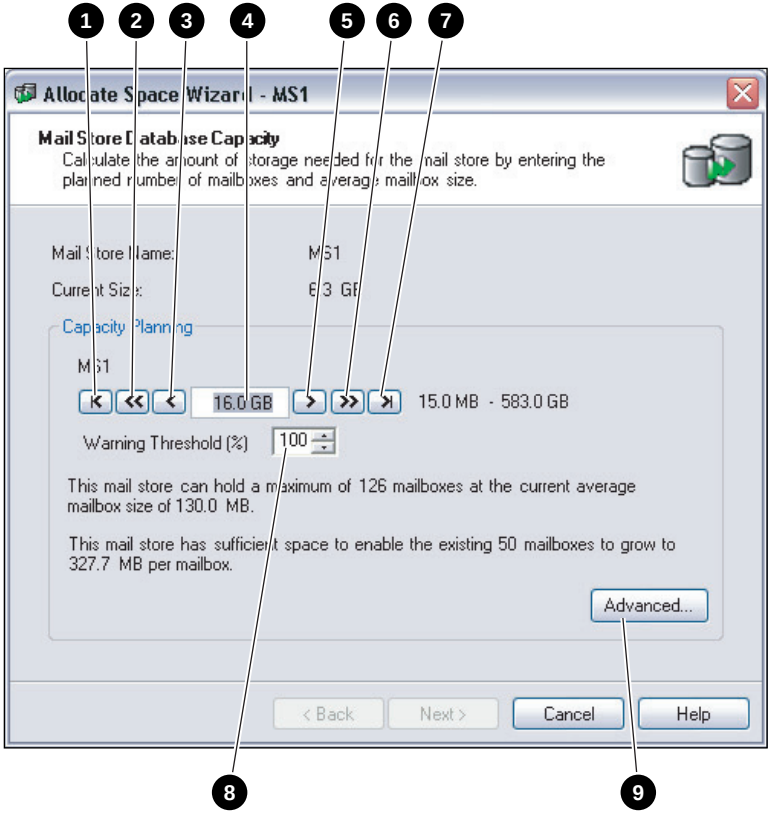
1. In the navigation pane, select **Monitor Applications, Monitor Exchange, Monitor Storage,** or **Monitor File Share**.
2. In the Task View pane, select the Exchange component or File Share you want to change.
3. From the menu bar, select **Actions** > **Allocate Space**.

Note: You can also select **Allocate Space** in the Actions pane or right-click on the Exchange component or File Share, and then select **Allocate Space**.

A configuration wizard opens to display the current allocated capacity settings of the Exchange component or File Share.

Make configuration changes to the Mail Store, Public Store, Log and File Share capacities by using the controls, selecting the Enforce Allocated Space Limit check box, or clicking the advanced button for advanced storage features. When you are finished with your changes, click **Next**.

Note: You can decrease the capacity only down to the current size.



❶ Decrease capacity to previous boundary (unallocated physical space, unallocated logical space, or capacity used)
❷ Decrease capacity by 10 units
❸ Decrease capacity by 1 unit
❹ Current capacity
❺ Increase capacity by 1 unit
❻ Increase capacity by 10 units
❼ Increase capacity to next boundary (capacity used, unallocated logical space, unallocated physical space, or all available space)
❽ Warning Threshold adjustment
❾ Advanced Storage Attributes button

Figure 19: Allocate Space wizard

4. Click **Next**.
5. The Task Summary dialog box opens to display a list of tasks to be performed.
   - To make configuration changes, click **Back**.
   - To run tasks immediately, click **Finish.**

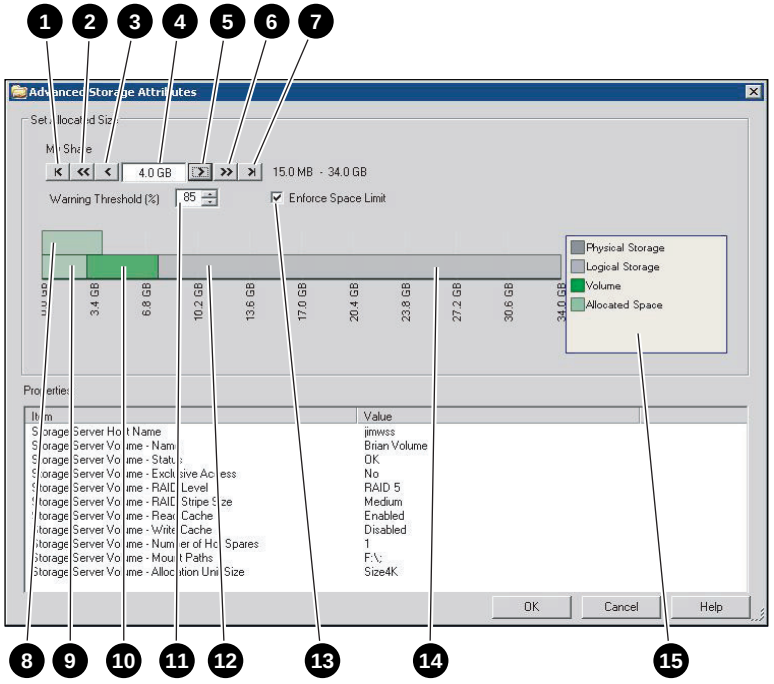
- To schedule tasks to run at a later time, select **schedule tasks to run later**, set the scheduler start time, and then click **Finish**.

The Tasks Viewer dialog box opens to display the status of the tasks.

Advanced Storage Attributes

The Advanced button is for Advanced Storage Attributes that allow detailed changes to the space allocated for the selected component.

The Advanced Storage Attributes dialog box displays the current space allocated for a volume, and space into which the volume can be expanded. If your allocated space does not display, see Troubleshooting.



❶ Decrease capacity to previous boundary (unallocated physical space, unallocated logical space, or capacity used)
❷ Decrease capacity by 10 units
❸ Decrease capacity by 1 unit
❹ Current capacity
❺ Increase capacity by 1 unit
❻ Increase capacity by 10 units
❼ Increase capacity to next boundary (capacity used, unallocated logical space, unallocated physical space, or all available space)
❽ Current set allocated space
❾ Current allocated space
❿ Volume
⓫ Warning Threshold adjustment
⓬ Unallocated Logical space
⓭ Enforce Space Limit
⓮ Unallocated Physical space (shown here if applicable)
⓯ Legend

Figure 20: Advanced Storage Attributes dialog box

Enforcing Allocated storage

The Application Storage Manager allows you to enforce your allocated space for File Shares. If enforced, the system does not allow you to exceed the amount of allocated space. You can assign a warning so that when the capacity of the space reaches the threshold (percent of full capacity), the File Share status changes from *ok* to *warning*, and a threshold notification can be sent to the administrator.

If the capacity of the share passes the threshold and reaches the allocated space, the File Share status changes from *warning* to *critical*, and you are blocked from adding data to the File Share.

Note: Threshold notifications are handled by the Microsoft Event Handler and is set up at the operating system level.

To enforce allocated space:

1. In the Task View pane, select the File Share you want to enforce.
2. From the menu bar, select **Actions** > **Properties**.

Note: You can also click **Properties** in the Actions pane, or right-click the File Share, and then select **Properties**.

---

3. Select the **Limits** tab.
4. Select the **Enforce Allocated Space Limit** check box.
5. Adjust the Warning Threshold percentage by using the up and down arrows.
6. Click **Apply**.
7. Click **OK**.

   The Tasks Viewer dialog box opens to display the status of the tasks that it is performing to enforce the allocated space.

Applications

Applications displays all applications that are currently being managed or monitored.

To monitor applications select **Applications** in the navigation pane.

Figure 21: Applications window

Using the Task Viewer

When storage changes are made to your system, the Task Viewer window opens (if the task is longer than two seconds) to display the list of tasks that the system is running, and the status of those tasks.

To manually open the Task Viewer, select **Tools** > **Task Viewer** from the menu bar.

The Task Viewer contains three tabs:

- **Current Task**—Displays the task that is currently being processed, the list of tasks in the queue, and all tasks that have been completed in the current session of the ASM client.
- **Errors**—Displays errors encountered as the system runs the tasks.
- **Task History**—Displays a history of the tasks that the system has completed.

To cancel any task that is displayed in the Task Viewer, select the task to be cancelled, and then click the **Cancel Task** button. Only the selected task is cancelled.

To cancel all tasks, click the **Cancel All** button.

Note: Cancelled tasks may not cancel immediately. They need to reach a logical stopping point and the state of the underlying storage may be affected.

Changing display settings

The Applications Storage Manager allows you to customize interface:

- Color settings
- Scaling settings
- Advanced allocate space settings.

Color display settings

To change the color settings:

1. From the menu bar, select **Tools** > **Options**.

   The Configure Options dialog box opens to display the current color settings.

2. Select an item in the Items list, and then select a color in the drop-down Color list.
3. When the color selections are complete, click **Apply** to apply the color settings to the Task View.
4. Click **OK** to close the Configure Options dialog box.

Scaling display settings

Scaling changes the display proportions of your logical disks and volumes, and application areas in the Task View pane.

To change the scaling settings:

1. From the menu bar, select **Tools** > **Options**.

   The Configure Options dialog box opens.

2. Click the Scaling tab at the top of the dialog box.

   You can change the storage display proportion settings in the following ways:

   - **Logarithmic**—Attempts to display logical disks and volumes, and application areas proportionally according to capacity but leaves it readable if areas are too small.
   - **Linear**—Displays logical disks and volumes, and application areas in actual proportions.
   - **Same size**—Displays logical disks and volumes, and application areas as the same size.

3. When the selections are complete, click **Apply** to apply the scaling settings to the Task View.
4. Click **OK** to close the Configure Options dialog box.

Advanced Allocate Space display settings

Advanced Allocated Space settings allow you to toggle-on and off the display of the Legend, Logical Storage and Physical Storage in your Advanced Storage Attributes dialog box. This allows a larger view of the storage area of interest.

Hiding logical or physical storage does not prevent you from growing into these areas.

Note: If you hide the logical storage, the physical storage is automatically hidden because you cannot grow into physical storage until you have used all of your logical storage.

To change the advanced allocate space display settings:

1. From the menu bar, select **Tools** > **Options**.

   The Configure Options dialog box opens.
2. Select the **Advanced Allocated Space** tab at the top of the dialog box.
3. Select the boxes next to the areas you want to display and clear the boxes next to the areas you want to hide.
4. Click **Apply**, and then click **OK**.

Accessing properties

Properties provides detailed information based on your current selection.

1. In the Task View pane, select an Exchange Storage Group, Exchange component, File Share Collection, or File Share.
2. From the menu bar, select **Actions** > **Properties**.

Note: You can also click **Properties** in the Actions pane, or right-click the Exchange Storage Group, Exchange component, File Share Collection, or a File Share, and then select **Properties**.

Accessing Exchange Application properties

1. In the navigation pane, select **Monitor Exchange**.
2. From the menu bar, select **Actions** > **Properties**.

Note: You can also click **Properties** in the Actions pane.

The Exchange Application Properties dialog box opens with the following tabs:

- General—Displays the storage group name, total capacity, status and details.
- Details—Displays the storage group details.

Accessing Exchange Storage Group properties

1. In the navigation pane, select **Monitor Exchange.**
2. In the Task View pane, select a storage group.
3. From the menu bar, select **Actions** > **Properties**.

Note: You can also click **Properties** in the Actions pane, or right-click the storage group, and then select **Properties**.

The Exchange Storage Group Properties dialog box opens with the following tabs:

- General—Displays the storage group name, total capacity, status and alert list.
- Details—Displays the storage group details.

Accessing Exchange Area properties

1. In the navigation pane, select **Monitor Exchange**.
2. In the Task View pane, select an Exchange component (Mail Store, Public Store, or Log).
3. From the menu bar, select **Actions > Properties**.

Note: You can also click **Properties** in the Actions pane, or right-click the Exchange component, and then select **Properties**.

The Exchange Component Properties dialog box opens with the following tabs (based on your selected component):

- General—Displays the Exchange area name, type, Exchange storage server, storage group, and area status.
- Storage—Displays the Exchange storage capacity, allocated space, used space, free space, and server details.
- Warning Threshold—Allows changes to the warning threshold.
- Mail Store Database—Allows Exchange Mail Store capacity planning and displays Mail Store details.
- Public Store Database—Allows Exchange Public Store capacity planning and displays Public Store details.
- Logs—Allows Exchange Logs capacity planning and displays Log details.

Accessing File Share Collection properties

1. In the Task View pane, select a File Share Collection.
2. From the menu bar, select **Actions** > **Properties**.

Note: You can also click **Properties** in the Actions pane, or right-click the File Share Collection, and then select **Properties**.

The File Share Collection Properties dialog box opens and displays information under the following tabs:

- General—Displays the File Share Collection Logical disk status and details.
- Storage—Displays the File Share Collection capacity, total space, used space, free space, and storage details.

Accessing File Share properties

1. In the Task View pane, select a File Share.
2. From the menu bar, select **Actions** > **Properties**.

Note: You can also click **Properties** in the Actions pane, or right-click the File Share, and then select **Properties**.

The File Share Properties dialog box opens and displays information under the following tabs:

- General—Displays the File Share name, type, path, comment, status and details.
- Storage—Displays the File Share storage capacity, allocated space, used space, free space, and details.
- Limits—Allows the enforcement of the allocated space limit and changes to the percent full warning threshold.
- Nested Shares—Displays a list of nested shares contained within the share being managed.

Accessing Unallocated Space properties

1. In the navigation pane, select **Monitor Storage**.
2. In the Task View pane, click Unallocated Space in the Application Area.
3. From the menu bar, select **Actions** > **Properties**.

Note: You can also select **Properties** in the Actions pane or right-click the Unallocated space, and then select **Properties**.

The Unallocated Space Properties dialog box opens and displays information under the following tabs:

- General—Displays the Volume name.
- Storage—Displays the Unallocated space used, free, and details.

Accessing Volume properties

For Volume properties:

1. In the navigation pane, select **Monitor Storage**.
2. In the Task View pane, select a Volume. Volumes are located above Application Areas.
3. From the menu bar, select **Actions** > **Properties**.

Note: You can also click **Properties** in the Actions pane, or right-click the Volume, and then select **Properties**.

The Volume Properties dialog box opens and displays information under the following tabs:

- General—Displays the name, Volume type, status, and alerts.
- Storage—Displays the total volume used, free, and details about the storage.

Accessing Logical Disk properties

1. In the navigation pane, click **Monitor Storage.**
2. In the Task View pane, click a Logical Disk.

   Logical Disks are located to the left of Application Areas.
3. From the menu bar, select **Actions > Properties**.

Note: You can also click **Properties** in the Actions pane, or right-click the Logical Disk, and then select **Properties**.

The Logical Disk Properties dialog box opens and displays information under the following tabs:

- General—Displays the Logical Disk name, status, and alerts.
- Storage—Displays the Logical Disk capacity information.

Support

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- If you still have a question after reading this guide, contact an HP authorized service provider or access the HP web site: http://www.hp.com.
- Telephone numbers for worldwide technical support are listed on: http://www.hp.com/support/.

  Be sure to have the following information available before calling:

  - Technical support registration number (if applicable)
  - Product serial numbers
  - Product model names and numbers
  - Applicable error messages
  - Operating system type and revision level
  - Detailed, specific questions
- The HP Storage web site has the latest information on this product, as well as the latest drivers: http://www.hp.com/country/us/eng/prodserv/storage.html.
- For the name of your nearest HP authorized reseller:
  - In the United States, call 1-800-345-1518.
  - In Canada, call 1-800-263-5868.
  - Elsewhere, see the HP web site for locations and telephone numbers: http://www.hp.com.

Troubleshooting

This Appendix provides troubleshooting information.

Table 3: Troubleshooting

Problem	Solution
A top-level share disappears.	A top-level share disappears when you share a folder above it in the hierarchy. The new shared folder becomes the top-level share. To see your original top-level share, remove the share properties from the folder that you added.
Allocated space does not display in the Advanced Storage Attributes.	From the Menu bar, select **Tools** > **Options**, and then select the **Advanced Allocate Space** tab. Clear the check boxes next to **Show Logical Storage** and/or **Show Physical Storage**, and then click **Apply**.
No Exchange servers are discovered during the Discovery process of the Exchange Storage Group Configuration Wizard.	Verify that the Application Storage Manager service is running as Domain Administrator. Select **Start** > **Settings** > **Control Panel** > **Administrative Tools** > **Services**. Right-click the **HP Application Storage Manager** service, and then select **Properties**. Select the **Log On** tab. Select the **This Account** button and enter the domain administrator account and password.

Glossary

This glossary defines terms related to the HP ProLiant Application Storage Manager.

Actions pane
The right-hand panel in the user interface that provides a list of actions, based on your current selection.

Allocated storage
Storage space which is being used by, or reserved for application data.

Bar graph view
Displays a graphical representation of Exchange Areas and File Shares.

Configuration wizard
A setup program that assists in hosting Exchange storage groups.

Exchange Agent
Software installed on an Exchange 2003 Server that provides Exchange specific data to the Application Storage Manager storage server.

Exchange Area (component)
A generic term for Mail Store database, Public Store database, or Storage Group Log files.

Exchange data
Data on an Exchange server (Mail Stores, Public Stores, or Logs) that can be migrated to, and managed by the Application Storage Manager.

Exchange Storage Group
A collection of mailbox stores and public folder stores that share a set of transaction log files.

File Share
A shared directory of files.

File Share Collection
A collection of shared directories.

Hosting
Migrating data from an Exchange server to the storage server where the Application Storage Manager resides.

HP ProLiant Storage Server iSCSI Feature Pack
Software that provides virtualization, allocation of disk storage, and centralized management for iSCSI host applications.

I/O
Input/Output. Used to describe any program, operation, or device that transfers data to or from a computer.

iSCSI (internet Small Computer System Interface)
An Internet protocol (IP-based) storage network standard for linking data storage facilities that carry SCSI commands over IP networks.

List view
Displays displays your storage applications as a hierachical tree.

Log
A file that maintains a record of every message stored in a storage group and provides fault tolerance in the event that a database must be restored.

Logical storage
All storage constructs above physical storage, but below a file system directory. This includes volumes, logical disks, virtual arrays, iSCSI LUNs, iSCSI pools, and iSCSI file devices.

Mail Store
The part of Microsoft's web storage system that maintains data in mailboxes.

Microsoft Exchange Server 2003
Microsoft's Communications Server software.

Menu bar
The horizontal menu that appears across the top of the user interface.

Navigation pane
The navigation pane allows you to navigate between the different storage areas.

Physical storage
All storage residing on mechanical disk drives.

Pie chart view
A high-level view of your applications that displays the overall storage utilization.

Public Store
The part of Microsoft's web storage system that maintains data in public folders.

Scaling
Changes the display proportions of your logical disks and volumes, and application areas in the Task View pane.

Share
A resource such as data or a printer device made available for use by users on other computer systems. For example, a printer or a collection of files stored in a single directory tree on a file server may be made available as a share.

Status bar
The area across the bottom of the user interface that displays server information and system alerts.

Storage capacity bars
Displays the allocated space and capacity used in the bar graph view.

Storage Group
An Exchange data type consisting of a number of Mail Stores and a Public Store.

Task view pane
The Task View pane is the primary window for monitoring your applications and displays the overall storage utilization.

Task viewer
A dialog box that displays the status of current tasks, errors, and task history.

Threshold
A storage capacity percentage that generates alerts announcing utilization is nearing a critical amount.

Toolbar
The area below the menu bar that contains icons for commonly used shortcuts.

Top-level share
First shared folders in a directory hierarchy.

Unallocated space
Storage space that is not being used or reserved for application data.

Volumes
A partition containing a file system.

Windows Storage Server 2003
Microsoft’s dedicated file server software.

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